# ART SEARCH RECORD

Patent Examiner Francis Moonan
US Patent Application: 09/622978
Inventor: Hull, Roger; Harper, Glyn

### I. EAST Search.

<u>Databases</u>=USPAT; US-PGPUB; EPO; JPO; DERW Date= 8 November 2001

Query=(Schenk.IN. or Sagi.IN. or Remy.IN. or Swennen.IN. or Dietzen.IN. or Geering.IN. or McMichael.IN. or thomas.IN or Grof.IN or Elliott.IN. or Hull.IN or Harper.IN or Lockhart.IN.) and (sugarcane or banana or plantain)

Results = 4
Art Considered = 4

Adams et al. 23 February 1999. Methods and compositions fro the production of stablytransformed fertile monocot plants and cells thereof. US Patent No. 5,874,265

Olszewski et al. 25 February 1999. Sugarcane bacilliform virus promoter. WIPO No. WO 99/09190

Olszewski et al. 30 November 1999. Sugarcane bacilliform virus promoter. US Patent No. 5,994,123

Olszewski et al. 25 July 2000. Sugarcane bacilliform virus promoter. US Patent No. 5,994,123

### II. DIALOG/STN Search.

<u>Databases</u>= AGRICULTURE <u>Date</u>=9 November 2001

Query=Schenk or Sagi or Remy or Swennen or Dietzen or Geering or McMichael or Thomas or Grof or Elliott or Hull or Harper or Lockhart and sugarcane or banana or plantain not mammal? not enzym? and virus or viral and pararetrovirus or badnavirus

Results = 146
Art Considered = 14

L8 ANSWER 1 OF 146 CAPLUS COPYRIGHT 2001 ACS 2001:763212 CAPLUS ACCESSION NUMBER: Eukaryotic recombinant bidirectional transcription TITLE: vector to effect gene silencing via dsRNA-mediated

inhibition of gene expression

Palmer, Kenneth E.; Pogue, Gregory P. INVENTOR(S):

PATENT ASSIGNEE(S): Large Scale Biology Corporation, USA

PCT Int. Appl., 73 pp. SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE: Patent English LANGUAGE:

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION: KIND DATE PATENT NO.

APPLICATION NO. DATE

-----WO 2001-US11436 20010404 WO 2001077350 A2 20011018

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,

 $HR,\,HU,\,ID,\,IL,\,IN,\,IS,\,JP,\,KE,\,KG,\,KP,\,KR,\,KZ,\,LC,\,LK,\,LR,\,LS,$ 

LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,

RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,

VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,

DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,

BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2000-545574 A 20000407

L8 ANSWER 14 OF 146 BIOSIS COPYRIGHT 2001 BIOSIS DUPLICATE 6

ACCESSION NUMBER: 2000:216163 BIOSIS DOCUMENT NUMBER: PREV200000216163

The rice tungro bacilliform virus gene II product interacts TITLE: with the coat protein domain of the viral gene III

polyprotein.

Herzog, Etienne; Guerra-Peraza, Orlene; Hohn, Thomas (1) AUTHOR(S):

CORPORATE SOURCE: (1) Friedrich Miescher Institute, Maulbeerstrasse 66,

CH-4058, Basel Switzerland

Journal of Virology, (March, 2000) Vol. 74, No. 5, pp. SOURCE:

2073-2083.

ISSN: 0022-538X.

DOCUMENT TYPE: Article

LANGUAGE:

English

SUMMARY LANGUAGE: English

L8 ANSWER 15 OF 146 AGRICOLA

2001:28866 AGRICOLA

ACCESSION NUMBER: DOCUMENT NUMBER:

IND22298361

TITLE:

Characterization and genomic analysis of tobacco vein

clearing virus, a plant pararetrovirus that

is transmitted vertically and related to sequences

integrated in the host genome.

AUTHOR(S):

Lockhart, B.E.; Menke, J.; Dahal, G.; Olszewski, N.E.

**DUPLICATE 7** 

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AVAILABILITY:

DNAL (QR360.A1J6)

SOURCE:

The Journal of general virology, June 2000. Vol. 81,

No. pt.6. p. 1579-1585

Publisher: Reading: Society for General Microbiology.

CODEN: JGVIAY; ISSN: 0022-1317

NOTE:

Includes references

PUB. COUNTRY:

England; United Kingdom

DOCUMENT TYPE:

Article

FILE SEGMENT:

Non-U.S. Imprint other than FAO

LANGUAGE:

**English** 

L8 ANSWER 25 OF 146 AGRICOLA

**DUPLICATE 13** 

ACCESSION NUMBER: **DOCUMENT NUMBER:**  2000:46607 AGRICOLA

IND22046496

TITLE:

Integrated pararetroviral sequences define a unique

class of dispersed repetitive DNA in plants.

AUTHOR(S):

Jakowitsch, J.; Mette, M.F.; Winden, J. van der.;

Matzke, M.A.; Matzke, A.J.M.

CORPORATE SOURCE:

Institute of Molecular Biology, Salzburg, Austria.

SOURCE:

Proceedings of the National Academy of Sciences of the United States of America, Nov 9, 1999. Vol. 96, No.

23. p. 13241-13246

Publisher: Washington, D.C.: National Academy of

Sciences.

CODEN: PNASA6; ISSN: 0027-8424

NOTE:

Includes references

PUB. COUNTRY:

District of Columbia; United States

DOCUMENT TYPE:

Article; Conference

FILE SEGMENT:

U.S. Imprints not USDA, Experiment or Extension

LANGUAGE:

**English** 

L8 ANSWER 26 OF 146 CAPLUS COPYRIGHT 2001 ACS **DUPLICATE 14** 

ACCESSION NUMBER:

1999:523005 CAPLUS

DOCUMENT NUMBER:

131:267862

TITLE:

A short open reading frame terminating in front of a stable hairpin is the conserved feature in pregenomic

RNA leaders of plant pararetroviruses

AUTHOR(S):

Pooggin, Mikhail M.; Futterer, Johannes; Skryabin,

Konstantin G.; Hohn, Thomas

CORPORATE SOURCE:

Friedrich Miescher Institute, Basel, CH-4002, Switz.

SOURCE:

J. Gen. Virol. (1999), 80(8), 2217-2228

PUBLISHER:

CODEN: JGVIAY; ISSN: 0022-1317 Society for General Microbiology

**DOCUMENT TYPE:** 

Journal

LANGUAGE:

**English** 

REFERENCE COUNT:

54

(1) Bacharach, E; Journal of Virology 1998, V72, P6944

REFERENCE(S):

(2) Bao, Y; Virology 1993, V197, P445 CAPLUS

(3) Bhattacharyya-Pakrasi, M; Plant Journal 1993, V4, P71 CAPLUS

(4) Bonneville, J; Cell 1989, V59, P1135 CAPLUS

(5) Bouhida, M; Journal of General Virology 1993, V74, P15 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 27 OF 146 Elsevier BIOBASE COPYRIGHT 2001 Elsevier Science B.V.

**DUPLICATE** 

ACCESSION NUMBER: 19

1999132177 Elsevier BIOBASE

TITLE:

A promoter from sugarcane bacilliform badnavirus drives transgene expression in banana and other monocot and dicot plants

AUTHOR:

Schenk P.M.; Sagi L.; Remans T.; Dietzgen R.G.;

Bernard M.J.; Graham M.W.; Manners J.M.

CORPORATE SOURCE:

P.M. Schenk, Coop. Res. Trop. Plant Pathol. Ctr.,

University of Queensland, John Hines Building, St.

Lucia, QLD 4072, Australia.

SOURCE:

Plant Molecular Biology, (1999), 39/6 (1221-1230), 39

reference(s)

CODEN: PMBIDB ISSN: 0167-4412

DOCUMENT TYPE:

Journal; Article

COUNTRY:

Netherlands

LANGUAGE: English SUMMARY LANGUAGE:

English

L8 ANSWER 29 OF 146 AGRICOLA

**DUPLICATE 17** 

ACCESSION NUMBER: DOCUMENT NUMBER:

2000:15812 AGRICOLA IND22025459

TITLE:

Structure and promoter/leader deletion analysis of mirabilis mosaic virus (MMV) full-length transcript

promoter in transgenic plants.

Dey, N.; Maiti, I.B.

CORPORATE SOURCE:

University of Kentucky, Lexington, KY.

AVAILABILITY:

AUTHOR(S):

DNAL (QK710.P62)

SOURCE:

Plant molecular biology, July 1999. Vol. 40, No. 5. p.

771-782

Publisher: Dordrecht: Kluwer Academic Publishers.

CODEN: PMBIDB; ISSN: 0167-4412

NOTE:

Includes references
: Netherlands

PUB. COUNTRY: DOCUMENT TYPE:

Article

FILE SEGMENT:

Non-U.S. Imprint other than FAO

LANGUAGE:

English

L8 ANSWER 106 OF 146 AGRICOLA

**DUPLICATE 57** 

ACCESSION NUMBER: DOCUMENT NUMBER:

93:51829 AGRICOLA IND93031884

TITLE:

An analysis of the complete sequence of a sugarcane bacilliform virus genome infectious to banana and

rice.

Bouhida, M.; Lockhart, B.E.L.; Olszewski, N.E.

CORPORATE SOURCE:

AUTHOR(S):

Institut Agronomique Hassan II, Agadir, Morocco

AVAILABILITY:

DNAL (QR360.A1J6)

SOURCE:

The Journal of general virology, Jan 1993. Vol. 74,

No. pt.1. p. 15-22

Publisher: Reading: Society for General Microbiology.

CODEN: JGVIAY; ISSN: 0022-1317

NOTE:

Includes references.

DOCUMENT TYPE:

Article

FILE SEGMENT:

Non-U.S. Imprint other than FAO

LANGUAGE:

English

L8 ANSWER 134 OF 146 GENBANK.RTM. COPYRIGHT 2001

LOCUS (LOC):

NTA414165 GenBank (R)

GenBank ACC, NO. (GBN): AJ414165

CAS REGISTRY NO. (RN): 361143-48-8

SEQUENCE LENGTH (SQL): 4806

MOLECULE TYPE (CI): DNA; linear

DIVISION CODE (CI): Plants, fungi, algae

3 Oct 2001 DATE (DATE):

Nicotiana tabacum ORF1, ORF2 and partial ORF3, **DEFINITION (DEF):** 

pararetrovirus-like sequence, V2.

KEYWORDS (ST):

coat protein; movement protein; ORF1; ORF2; ORF3;

polyprotein

SOURCE:

common tobacco.

Nicotiana tabacum ORGANISM (ORGN):

Eukaryota; Viridiplantae; Streptophyta; Embryophyta;

Tracheophyta; Spermatophyta; Magnoliophyta;

eudicotyledons; core eudicots; Asteridae; euasterids I;

Solanales; Solanaceae; Nicotiana

NUCLEIC ACID COUNT (NA): 2445 a 542 c 699 g 1120 t

REFERENCE:

1 (bases 1 to 4806)

Jakowitsch, J.; Mette, M.F.; van Der Winden, J.; AUTHOR (AU):

Matzke, M.A.; Matzke, A.J.

Integrated pararetroviral sequences define a unique TITLE (TI):

class of dispersed repetitive DNA in plants

JOURNAL (SO):

Proc. Natl. Acad. Sci. U.S.A., 96 (23), 13241-13246

(1999)

OTHER SOURCE (OS): CA 132:103712

REFERENCE:

2 (bases 1 to 4806)

AUTHOR (AU):

van der Winden,J.

TITLE (TI):

**Direct Submission** 

JOURNAL (SO):

Submitted (25-SEP-2001) van der Winden J., Plant

Molecular Genetics, Institute of Molecular Biology,

Billrothstrasse 11, 5020 Salzburg, AUSTRIA

FEATURES (FEAT):

Feature Key

Location

Qualifier

1..4806 source

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/db-xref="taxon:4097"

mRNA

202..1998

/note="ORF1"

exon

202..1998

/note="ORF1"

/number=1

/note="ORF1"

202..1998 **CDS** 

/codon-start=1

/product="putative coat protein" /protein-id="CAC88783.1"

/db-xref="GI:15963357"

/translation="MNKEEFALEEKTYENPEGLK

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EMLKQMYANKLKEKEKRKEEEEELKLTNEIERFK

LQLEEVQESPSKISINEINDQSDK **DTELGENYSETSETYTELIEKTEKIKINPEINTG** DMNEDKPSISGIKNPKQLNPTYYR VSYDAYDRNKTLWDKRLNKKWAPRQITEQYNFLD LDCVADINKTIQLWIGYISKQLID NKITITETPGYIERTLIGTVKLWLQNLSSESLDT LRSNKKLDGTTTTTVTDILNKYEI AIRNEFSSMTTEVEEQNKEKITNRNLMTKLAICN **MCYIDEYTCAFRDYYYKGTYSPDE** SKEIRKLYFTKLPEPFSSKIIKSWNEAGLADTLG **VRIKFLQNWFIELCEKYKENMKME** KILVKNLACCKSRIAPOFGCTDKYYKKEGKKKKF KSKYSKYKYRKPRRRYYVKNYKHK KPYRKKKLTECTCYNCGKLGHLAKDCKLPKNPK KKOITEILIDNDKYTOVEYVDYEL SSEDSMYEISENEFSESEINKDIEESDEENYD"

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79..2932 /note="ORF2 truncated"

/codon-start=1

/product="putative movement

protein"

/protein-id="CAC88784.1"

/db-xref="GI:15963358"

/translation="MKKIMTEKDIQIIQQEEHQD

EQSSEQKIIFDANIFEQIKGKELD

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IKAKNPIKYVHLGGTEILTKACFREGIDTPIEIY

LADDRIVQPIEKSIISAVRGNLIY

KKLKSIVSANYSVAVDDKNIDKSLVLYWKMSGIE

LAPGSKIFTARCKNLYVLTTKHKI

TAKNKINKIKIENPFERIVSVIDNNDYSYTEIDM

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YITGIMD"

exon 1979..2932

/note="ORF2" /number=1

exon 3256..>4806

>4806 /note="ORF3"

/number=1

mRNA

3256..>4806

/note="ORF3"

CDS

3256..>4806

/note="ORF3 aspartic proteinase,

reverse transcriptase,

ribonuclease H"

/codon-start=1

/product="putative polyprotein"

/protein-id="CAC88785.1"

/db-xref="GI:15963359"

/translation="MPKIYILSKIIVEGYYNRYY

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KLKNPIVVTGFNNEGSMITYKARNIKIQIWDKIL

TIEEIYSYEFTNKDILLGMPFLDK

LYPHIITKTHWWFTTPCKQKLGAKRVNNKVRKTT

**PWIKGSEKITOKLENIIOSNHNIE** 

IIIFSINKIKPLQDKLELLYNDNPLQGWEKHQTK

**IKIELIDENSIITQKPLKYNFNDL** 

**TEFKMHIKELLDNNYIQESNSKHTSPAFIVNKHS** 

EQKRGKSRMVIDYRNLNAKTKTYN
YPIPNKILKIRQIQGYNYFSKFDYKSGFYHLKLE
DESKKLTAFTVPQGFYEWNVLPFG
YKNAPGRYQHFMDNYFNQLENCIIYIDDILLYSR
TENEHIKLLEKFIHIVEISGISLS
KKKAEVMKNQIEFLGIQMDKNGIKMQTHVVQKII
NLNETLDTKKKLQSFLGLVNQVRE
YIPKLAENLKPLQKKLKKDIEYHFDEKDKIHIQK
IKNMCKKLPKLYFPDEKKQFTYIV
ETDSSDRVD"

### SEQUENCE (SEQ):

- 1 cattaatagt acaaacccgc aaaacagtga aacaatcaaa ataactaaga aatcgcagaa
- 61 aattaggaag aaactaaaga aactatatat agaatatgaa tacttaagta tcacaaaaat
- 121 aaacaaagct aggttgtcca aattaatcga tataatatct aaaacagaat ataaatatgt
- 181 ttgttatcta aaggataaaa gatgaataaa gaagaattcg cattagaaga gaaaacatat
- 241 gagaatccag aaggattaaa aataacaata atattttcta acttaggaag aagatataaa
- 301 aaaataggaa ataacctaaa cttaatgtta gaaaaagaaa ctgtaaaact agaggatagt
- 361 ttaaccgcca tggttagaat aacaaaagaa aacgaagaaa tagatagaaa acgagagatt
- 421 aaagaaatac aacagcaagc taaagaaaaa atacaacaga tagaggaagt aaaaaaacact
- 481 aaaataacag aattagaaaa agaattagag atgctaaaac agatgtatgc aaataaacta
- 541 aaagaaaagg aaaaacgtaa agaagaagaa gaagaactaa aactaacaaa tgagatagaa
- 601 agattcaaat tacagttaga agaagtacag gagagtccat caaaaataag tataaacgaa
- 661 ataaatgacc aaagtgataa agacacagaa ctaggagaaa actattcaga aacaagtgaa
- 721 acatacacag aacttataga aaaaacagaa aagataaaaa taaacccaga aataaataca
- 781 ggagatatga acgaagataa accaagcata tcaggaataa aaaatccaaa acaattaaac
- 841 ccaacctatt acagagtaag ttatgatgca tatgacagaa acaaaacatt atgggataaa
- 901 aggttaaata agaaatgggc accaagacag ataactgaac aatataattt tttagatcta
- 961 gattgtgtag cagatataaa taaaacaata caattatgga taggatatat ctcaaaacaa
- 1021 ctaatagata ataaaataac aataacggaa acaccaggat atatagaaag aacattaata
- 1081 ggaactgtaa aattatggtt acaaaattta tcaagtgaaa gcttagacac attaaggagt
- 1141 aataaaaaac ttgacggtac aactacaaca acagttacag atatattaaa taaatatgaa
- 1201 atagcaataa gaaatgaatt tagtagtatg acaacagaag tagaagaaca aaataaagaa
- 1261 aaaattacaa atagaaattt aatgacaaaa ttagcaatat gtaatatgtg ttatatagat
- 1321 gaatatactt gtgcatttag agactattat tataaaggga catatagtcc agatgaaagt
- 1381 aaagagataa gaaaattata ttttacaaaa ttaccagaac cetttagete aaaaataata
- 1441 aaaagttgga acgaagcagg actagcagat acattaggag taaggataaa atttctacaa 1501 aactggttta tagaattatg tgaaaaatat aaagaaaaca tgaaaaatgga aaaaatatta
- 1561 gtaaaaaatt tggcatgttg caaaagtaga atagcacccc aatttggctg cacagataaa
- 1621 tattacaaaa aagaaggaaa gaaaaagaaa tttaaatcaa aatattcaaa gtataaatat
- 1681 aggaaaccaa gaagaagata ttatgtaaaa aattataaac ataaaaaacc atacaggaaa
- 1741 aagaaaaaac taacagaatg tacttgctat aattgtggaa agctaggaca cttagccaaa
- 1801 gattgtaaat taccaaaaaa cccaaagaag aaacaaatta ccgaaatatt gatagataat
- 1861 gataaatata cacaagtaga atatgtagat tatgaattaa gcagcgaaga cagcatgtat
- 1921 gagatatcag aaaacgagtt ctctgaaagt gaaataaaca aggatataga agagtcagat
- 1981 gaagaaaatt atgactgaaa aagatataca aattatacaa caagaagaac accaagatga
- 2041 acaatettea gaacaaaaaa taatatttga egetaatata tttgaacaaa taaaaggaaa
- 2101 agaattggat ctaagtatag acaaaatatt agaagtacca acaataaaga attggtttaa
- 2161 aagacaaaaa gaagaatact atgtagtaag ccaaagagaa catataatag attgtaaata
- 2221 catcaaaggt aaagcacaaa taccaatttt aaataaaaga ctactaaata aagaaataca
- 2281 agatataaaa gcaaaaaatc caataaaata tgtacactta ggaggaacgg agatcctaac
- 2341 aaaagcatgt tttagggaag gaatagatac ccctatagaa atatacttgg cagatgatag
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- 2461 aaaattaaaa tctatagtaa gtgctaacta ttcagtagca gtagatgata aaaatataga
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2641 aaataaaata aataaaataa aaatagaaaa teeattegaa agaatagtat eagttataga 2701 caacaatgat tacagttata cagaaataga catggatgaa gatttagaaa tagtaaaaga 2761 aagattaagc acatcaaaac gaataaataa tgaaatgcca gaaacatcat caagaagtac 2821 atcaagaagt acatcaaaaa gaataaatta taccactcca caaaaattaa tagaacaaaa 2881 aatagaagaa ataaacccac atcattatta tataacagga ataatggact aaagaaaata 2941 tttaatacta ataaatacag ggcaggaaga gaattatgtt ataagagaac taataccaga 3001 acaagagata gtaacaatag aacaacaaaa ttcagaacta ccaaaagcgt taagaaaaaa 3061 cgaagaaaca actgaaaaag aattaattat tggaggaata ccaatattaa taaattttaa 3121 aatatatcaa ggagataaaa atattacact agggataaaa tggttagaaa aagtcaaacc 3181 atataaatta gaagatagac aattaacaat aagttatgaa aataagaaaa taataataaa 3241 aagaactttg atataatgcc aaagatatac atactttcca aaataatagt agaaggatat 3301 tataatagat attatacacc tatggtggat acaggagcag aagctaatat gtgtagacat 3361 aattgtttac cagaaagtaa atgggaaaag ctaaaaaaacc ccatagtagt aacaggattt 3421 aataatgaag gtagtatgat aacatataaa gcaagaaata taaaaataca aatatgggat 3481 aaaatattaa ccatagaaga aatatatagt tacgaattca caaataaaga tatattatta 3541 ggaatgccat ttttagataa attataccca catattataa caaaaacaca ttggtggttt 3601 actaccccgt gtaaacaaaa attaggagca aaaagagtaa ataataaagt aagaaaaaca 3661 acaccetgga ttaaaggaag tgaaaagatt acccaaaaat tagaaaatat aatacaaagt 3721 aaccataata tagagataat cattttctca ataaataaga taaaaccact acaagataaa 3781 ctagaattac tatataatga taatccactc caaggatggg aaaaacatca aacaaaaata 3841 aagattgaac taatagatga aaatagcata ataacacaaa aacctttaaa atacaatttt 3901 aatgatttaa cagaatttaa aatgcatata aaagaattat tagataataa ctacatacaa 3961 gaaagtaata gtaaacatac tagcccagca tttatagtaa ataagcatag tgaacaaaaa 4021 agaggaaaaa gccgtatggt tatagattat agaaacttaa atgcaaaaac aaaaacatat 4081 aattateega taccaaataa aatactaaaa attagacaaa tacaaggata taactatttt 4141 agtaaatttg actataaatc aggattttac catttaaaac tagaagatga atctaaaaag 4201 ttaacagcat tcacagtacc acaaggattt tacgaatgga acgtattacc ttttggatat 4261 aaaaatgcac caggtaggta tcaacatttt atggataatt acttcaacca attagaaaat 4321 tgtataatat atatagatga tatattgeta tattetagaa cagagaacga acatataaaa 4381 ctactagaaa aattcataca cattgtagaa atatcaggaa taagtttaag taaaaagaaa 4441 gcagaagtaa tgaaaaatca aatagaattt ttaggtatac aaatggataa aaacggaata 4501 aaaatgcaaa cccatgtagt acaaaaaata attaacttga atgaaacact tgatacaaaa 4561 aagaagttac aatcattttt aggattggtt aaccaagtaa gagaatatat teetaaatta 4621 gcagaaaact taaaaccatt acagaaaaaa ttaaaaaagg acatagaata tcattttgac 4681 gaaaaagata aaatacatat acagaagata aaaaatatgt gtaaaaaatt accaaaacta 4741 tattttccag atgaaaagaa acaatttaca tatattgtag aaactgattc tagtgatcga 4801 gtcgac

L8 ANSWER 135 OF 146 GENBANK.RTM. COPYRIGHT 2001 LOCUS (LOC): NTA414164 GenBank (R) GenBank ACC. NO. (GBN): AJ414164

CAS REGISTRY NO. (RN): 361143-47-7
SEQUENCE LENGTH (SQL): 6060
MOLECULE TYPE (CI): DNA; linear
DIVISION CODE (CI): Plants, fungi, algae

DATE (DATE): 3 Oct 2001

DEFINITION (DEF): Nicotiana tabacum partial ORF2, ORF3 and ORF4,

pararetrovirus-like sequence, V3.

KEYWORDS (ST): movement protein; ORF2; ORF3; ORF4; polyprotein; translatio; transactivator/inclusion body protein

SOURCE: common tobacco.

ORGANISM (ORGN): Nicotiana tabacum

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Nicotiana

NUCLEIC ACID COUNT (NA): 2724 a 857 c 915 g 1559 t 5 others 1 (bases 1 to 6060) REFERENCE: Jakowitsch, J.; Mette, M.F.; van Der Winden, J.; AUTHOR (AU): Matzke, M.A.; Matzke, A.J. Integrated pararetroviral sequences define a unique TITLE (TI): class of dispersed repetitive DNA in plants Proc. Natl. Acad. Sci. U.S.A., 96 (23), 13241-13246 JOURNAL (SO): (1999)OTHER SOURCE (OS): CA 132:103712 2 (bases 1 to 6060) REFERENCE: van der Winden,J. AUTHOR (AU): **Direct Submission** TITLE (TI): Submitted (24-SEP-2001) van der Winden J., Plant JOURNAL (SO): Molecular Genetics, Institute of Molecular Biology, Billrothstrasse 11, 5020 Salzburg, AUSTRIA

FEATUI Feature	RES (FEAT): Key Locati	on Qualifier	
source	16060	/organism="Nicotiana tabacum"	
		/db-xref="taxon:4097"	
exon	<31157	/note="ORF2"	
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mRNA	<31157	/note="ORF2"	
CDS	<31157	/note="ORF2"	
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  JOURNAL (SO):
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AUTHOR (AU):

Direct Submission TITLE (TI):

JOURNAL (SO):

(SO): Submitted (25-SEP-2001) van der Winden J., Plant Molecular Genetics, Institute of Molecular Biology, Billrothstrasse 11, 5020 Salzburg, AUSTRIA

FEATURES (FEAT):
Feature Key Location

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at the state of

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L8 ANSWER 137 OF 146 GENBANK.RTM. COPYRIGHT 2001

LOCUS (LOC):

AF190123 GenBank (R)

GenBank ACC. NO. (GBN): AF190123

CAS REGISTRY NO. (RN): 248236-12-6

SEQUENCE LENGTH (SQL): 7767

MOLECULE TYPE (CI): DNA; linear

DIVISION CODE (CI): Viruses

DATE (DATE):

23 Jun 2000

DEFINITION (DEF): Tobacco vein-clearing virus, complete genome.

SOURCE:

tobacco vein-clearing virus.
(N): tobacco vein-clearing virus

ORGANISM (ORGN): tobacco ver Viruses; Retroid viruses

NUCLEIC ACID COUNT (NA): 3729 a 959 c 1150 g 1929 t

REFERENCE:

1 (bases 1 to 7767)

AUTHOR (AU):

Lockhart, B.E.; Menke, J.; Dahal, G.; Olszewski, N.E.

TITLE (TI):

Characterization and genomic analysis of tobacco vein

clearing virus, a plant pararetrovirus that

is transmitted vertically and related to sequences

integrated in the host genome

JOURNAL (SO): J. Gen. Virol., 81 Pt 6, 1579-1585 (2000)

OTHER SOURCE (OS): CA 133:306131

REFERENCE:

2 (bases 1 to 7767)

AUTHOR (AU):

Lockhart, B.E.; Menke, J.; Dahal, G.; Olszewski, N.

TITLE (TI):

**Direct Submission** 

JOURNAL (SO):

Submitted (25-SEP-1999) Plant Biology, University of

Minnesota, 220 Biological Sciences Center, St. Paul, MN

55108, USA

FEATURES (FEAT):

Feature Key Location

Qualifier

source

1..7767

/organism="tobacco vein-clearing

virus"

/specific-host="Nicotiana

edwardsonii"

/db-xref="taxon:107324"

CDS

416..2155

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CDS 2155..3414

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SKVFTARCKNLYVLTTKHKIAAKN

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CDS 3411..5318

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WIRGSEKITOKLENINKNTTTQLE

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CDS 5275..6528

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TGYNKLIALPNTSAKLVATCYNYG

LLDTVYTQTGQEIANIPELYKAFMQYKRITKGTL

**FYVRFYSATAEILYEEIKPIIQVI** 

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- 61 aaacagtgta agaaaaacaa acaagaaact aagaaagtta tactctgaat ataaaaaaatt
- 121 acacataaca aagatagata ataataggtt agaacaacta atagatatca tatctaatac
- 181 agaatataaa tatatccagt atttgaaaaa acagtatgaa caaggaagaa tataaacaac
- 241 aactttttga aaaaattaca gaaaaaagac aagaattacg acatagacaa gataggctta
- 301 agaataatat atttgctgga acttgccaga aatctttact agttcaaaga aaaattatat
- 361 taaatttaca aatacaaata caacagtttg aatatatact ccaacataac ctataatgaa
- 421 taaagaagaa tttgcgatag atgaaaagac atatgaaaac caagatggat tgaaaataaa
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- 781 aacggatgag ataaataaat tcaaacaaaa attacaacca gaagaaaacc tcagaattga
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- 901 tacagaaatt ttagaaaata tagaaaaaac aaaaaattta gaaataaata caggggatgt
- 961 aaatatggat gaaaaaccta gcacatcagg tataaagaat ccaaaagaat taaacccaag
- 1021 ttattataca gttagttatg aacaatctga tagaaataat acactatgga atagtagact
- 1081 aaataaaaaa tggacaccaa aaccaataca tgagcaatat aactttttag atttagattg
- 1141 tgtagaggat ataaataaaa caatccaact atggatagga tatatatcta aacaattaat
- 1201 agataataaa ataggaataa cagaaacacc aggatatata gaaaggacac ttatagggac
- 1261 agtaaaatta tggttacata atttaacaaa agaaagtata gatactttaa gaagtaataa
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- 1381 cataagaaac gaatttagta gtatgactac agaaacagaa gaacaacata aggaaaaaca
- 1441 aataaataga aacctaatga caaaattagc aatatgtaat atgtgctata tagatgaata
- 1501 tacttgtgca tttagagaat attattataa aggaacatat aatacagaag aaggcagaga
- 1561 aataagaaaa ttatatttca caaaattacc agaacctttt agttcaaaaa taataaagga
- 1621 ttggaatgaa gcaggattaa cagatacttt aggagctagg ataaaatttt tacaacaatg
- 1681 gtttgtacaa ttatgtgaga aatataaaga agaaataaaa atggaaaaaa tattaataaa

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L8 ANSWER 138 OF 146 GENBANK.RTM. COPYRIGHT 2001
LOCUS (LOC): NTA238747 GenBank (R)
GenBank ACC. NO. (GBN): AJ238747
CAS REGISTRY NO. (RN): 225689-87-2
SEQUENCE LENGTH (SQL): 7981
MOLECULE TYPE (CI): DNA; linear
DIVISION CODE (CI): Plants, fungi, algae
DATE (DATE): 11 Nov 1999
DEFINITION (DEF): Nicotiana tabacum pararetrovirus-like sequence, ORF1, ORF2, ORF3 and ORF4.

coat protein; inclusion body protein; movement protein; KEYWORDS (ST): polyprotein; translation transactivator common tobacco. SOURCE: Nicotiana tabacum ORGANISM (ORGN): Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Solanales; Solanaceae; Nicotiana NUCLEIC ACID COUNT (NA): 3814 a 1023 c 1189 g 1955 t 1 (bases 1 to 7981) REFERENCE: Jakowitsch, J.; Mette, M.F.; van Der Winden, J.; AUTHOR (AU): Matzke, M.A.; Matzke, A.J. Integrated pararetroviral sequences define a unique TITLE (TI): class of dispersed repetitive DNA in plants Proc. Natl. Acad. Sci. U.S.A., 96 (23), 13241-13246 JOURNAL (SO): (1999)OTHER SOURCE (OS): CA 132:103712

2 (bases 1 to 7981) REFERENCE: Jakowitsch,J. AUTHOR (AU):

TITLE (TI):

**Direct Submission** 

Submitted (16-APR-1999) Jakowitsch J., Institute of JOURNAL (SO): Molecular Biology, Austrian Academy of Sciences,

Billrothstrasse 11, Salzburg, Salzburg, A - 5020,

**AUSTRIA** 

FEATURES (FEAT):

**Oualifier** Location Feature Key /organism="Nicotiana tabacum" 1..7981 source /cultivar="petit havana SR1" /db-xref="taxon:4097" /partial primer-bind 1..12

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DTELGENYSETSETYTELIEKTEKIKINPEINTG

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LDCVADINKTIQLWIGYISKQLID

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(aspartic proteinase, reverse

transcriptase, ribonuclease H)"

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- 121 cagaaaatta ggaagaaact aaagaaacta tatatagaat atgaatactt aagtatcaca
- 181 aaaataaaca aagctaggct gtccaaatta atcgatataa tatctaaaac agaatataaa
- 241 tatatttgtt atctaaagga taaaagatga ataaagaaga attcgcatta gaagagaaaa
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- 721 acgaaataaa tgaccaaagt gataaagaca cagaactagg agaaaactat tcagaaacaa
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- 841 atacaggaga tatgaacgaa gataaaccaa gcatatcagg aataaaaaaat ccaaaacaat
- 901 taaacccaac ctattacaga gtaagttatg atgcatatga cagaaacaaa acattatggg
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- 1081 aacaactaat agataataaa ataacaataa cggaaacacc aggatatata gaaagaacat
- 1141 taataggaac tgtaaaatta tggttacaaa atttatcaag tgaaagctta gacacattaa
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- 1261 atgaaatagc aataagaaat gaatttagta gtatgacaac agaagtagaa gaacaaaata
- 1321 aagaaaaaat tacaaataga aatttaatga caaaattagc aatatgtaat atgtgttata
- 1381 tagatgaata tacttgtgca tttagagact attattataa aggaacatat agtccagatg
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- 1561 tacaaaactg gtttatagaa ttatgtgaaa aatataaaga aaacatgaaa atggaaaaaa 1621 tattagtaaa aaatttggca tgttgcaaaa gtagaatagc accccaattt ggctgcacag
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L8 ANSWER 139 OF 146 GENBANK.RTM. COPYRIGHT 2001 LOCUS (LOC): U95208 GenBank (R) GenBank ACC. NO. (GBN): U95208 CAS REGISTRY NO. (RN): 197678-22-1 SEQUENCE LENGTH (SQL): 7206 MOLECULE TYPE (CI): DNA; linear

DIVISION CODE (CI): Viruses 28 Jun 2001 DATE (DATE):

Petunia vein clearing virus, complete genome. DEFINITION (DEF):

petunia vein clearing virus. SOURCE: petunia vein clearing virus ORGANISM (ORGN):

Viruses; Retroid viruses; Caulimovirus

NUCLEIC ACID COUNT (NA): 2383 a 1470 c 1285 g 2068 t

COMMENT:

On Jun 28, 2001 this sequence version replaced gi:2463654.

REFERENCE:

1 (bases 1 to 7206)

**AUTHOR (AU):** 

Richert-Poggeler, K.R.; Shepherd, R.J.

TITLE (TI):

Petunia vein-clearing virus: a plant

pararetrovirus with the core sequences for an

integrase function

JOURNAL (SO):

Virology, 236 (1), 137-146 (1997)

OTHER SOURCE (OS): CA 127:327178

REFERENCE:

2 (bases 1 to 7206)

AUTHOR (AU):

Richert-Poeggeler, K.R.; Hohn, T.

TITLE (TI):

Isolation of an infectious full-length clone of petunia

vein clearing virus (PVCV) from infected Nicotiana

glutinosa

JOURNAL (SO):

Unpublished

REFERENCE:

3 (bases 1 to 7206)

AUTHOR (AU):

Richert-Poeggeler, K.R.; Shepherd, R.J.

TITLE (TI):

**Direct Submission** 

JOURNAL (SO):

Submitted (26-MAR-1997) Agronomy, University of

Kentucky, Lexington, KY 40546-0091, USA

REFERENCE:

4 (bases 1 to 7206)

AUTHOR (AU):

Richert-Poeggeler, K.R.; Shepherd, R.J.

TITLE (TI):

**Direct Submission** 

JOURNAL (SO):

Submitted (28-JUN-2001) Agronomy, University of

Kentucky, Lexington, KY 40546-0091, USA

FEATURES (FEAT):

Location Feature Key

Qualifier

source

1..7206

/organism="petunia vein clearing

virus"

/specific-host="petunia hybrida

cv. Himmelsroeschen" /db-xref="taxon:59504"

/note="isolated from Nicotiana glutinosa which can be infected

with the virus via grafting"

**CDS** 

51..6590

/note="contains putative movement

protein, RNA binding domain, protease, reverse transcriptase,

and RNase H"

/codon-start=1 /product="ORF I polyprotein" /protein-id="AAK68664.1"

/db-xref="GI:14574598"

/translation="MTSPSDYQSNSSLATTYSNA

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PRHVKEYVAASKLDQHPVFATGEE

QFVTLHIPEEFASHWKSHQFTHIHFGAVKIALTY HGRKGQPVVARLALLDTRYLEYQH ANLGTAEITLNAGTVFITLFPNFTMSLSDANLST ALKIQVQIQGAPLTKDSIQATLHY QIAWRVQNHAMDLTLPGGEEALFLKIDAGSGATQ CTQVPRQLSKEDLIKILPDSWVTN YEKLREPEEPLRSTEVSMSKRHDKSVAISFDHSH YKKLRNTHHFMGMISDDVIVLDDP ETFSKTLPSLMQTHDWIHHFQLDGRAVSWYKDPF DGHCPWDIDCQCYSCLYSEDEEDF EDGFPTKYKGIPRPGSIAERKMQEEANLKKLYEE KDPFVGSLSRPGKYEYLVRYDAPS WAKDPHLTVEPTGWDSDEPIPPKQPFTTRNTLPK IYMFNPLNYENNFPPLSSFSKDGA DHTPKIPKRNVVLPSGAKDPTGDLEATVNWQTEN ALAQNRMLTTIDRTLKETVTKVDR VTDQSSKNQGLIKVLEQQLQDLNKRICPPGTSLF HFFDQQKSEMASLKEQIRLLKEQP QKNETDTPSYQSSYQPFHSFSSPYMPSNPPNSPF TTFANTPQPQPSLFSQYPIQPKSP NTFDLAKLVWEKKDAIAAEKRAKKKLQKDEVKQK TSLPPESKRPDPQSSSHLGDQFMI SDPALPKVYALNEPSVPSEDTSSQSYISTEESVE DTDSFSVVSEESTQLSQLSSSSND SPENNENTLPQTFMVRPTEPEISEVEDEVDGMTE **EPIPERRPEITPPKMVGTGFHTFS** LDDISITKWPERIQDFHTWMLTKQLVEREPFLIL SEFTARLSGTLREWWNSVGPDDKN RFLTSQDFTWNIRILYSYFCGDQSQNKEELRRQI FEMKCLSYDRKKIDRHFQRMIKLF YHIGGDISLKQAFISSLPPILSERISALIKERGT SVTQMHVGDIRQTAFYVLDDLCSK RKFFNQMKKMSRDLEKACTKSDLIIKGDKGCSGY CNPSRRRKYKRFKLPSFKERDGRQ YRKRRRFFRRSKTSKAMRQKPRSCFTCGKIGHFS RNCPQNKKSIKLISEIQKYTGIDI **EDDLESVFSIEDEPSEDTLFSLEFYEEYAGEQYQ** ITSYEAPKTENPPLPKIHTIVEIP QTEVKIYTSKWDKPISVIAFYDTGAAYSIMDPAI LPSEYWIPHFRHFGTADDGILTTT VKTKHPITIEFFPGFKYTTKLLGSDIPGKDLLIG FDIYRQLNNKLRIGADGIRWKNQF KRYTEIPRLFQLTTSNELQQLEDVIKNQLCADSH VDFLSKCSHPLWLNQDFFIQLPFK KNENINPTKASHSGMNPEHLQLAIKECDELQQFD LIEPSDSQWACEAFYVNKRSEQVR GKLRLVINYQPLNHFLQDDKFPIPN KLTLFSHLSKAKLFSKFDLKSGFWQLGIHPNER PKTGFCIPDRHFQWKVMPFGLKTAPSLFQKAMIK **IFQPILFSALVYIDDILLFSETLE** DHIKLLNQFISLVKKFGVMLSAKKMILAQNKIQF LGMDFADGTFSPAGHISLELQKFP DTNLSVKQIQQFLGIVNYIRDFIPEVTEHISPLS DMLKKKPPAWGKCQDNAVKQLKQL AQQVKSLHIPSEGKKILQTDASDQYWSAVLLEEH NGKRKICGFASGKFKVSEQHYHST

FKEILAVKNGIKKFNFFLIHTNFLVEMDMRAFPK MIRLNPKIVPNSQLLRWAQWFSPY OFEVKHLKGKDNILADFLSRPHEFSQRLKNSPKV **LMFORRTRSSSTKSKADSSQSTGS** SYKLSHNLPENPPEVFNLDYPWDTSVFLERRTFY ELOVFKKYGGSILRPFGVDPEYPF AHIFIPNPTDFSEDLLWMFWYLLNHFHILMKFRC SKFSKIDQVNPWMLKFLLWFNNHN YWASLFKCMKGIKKYVVIWFYRPVNYYQGKLCAL **PHSSIVKWNHVSVLNDEDEYSELQ** RFIFQENKCIPKEIWPGSSGSWNYGNSDHPHGQW IRDALREYREMNDYFQDAQDPYPA YSKVDLTQEELNTLRITRSYGSSSEDADMVKRSI YTVOSNIVKDSPRKRKGKAKSRSS TRSEKRRAKNKCKYRSLHGEDWWIELGYSTKPST PSWTQDSSSEPCV"

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- 61 ettetgatta teaateeaat teetetetgg etaeeaetta ttetaatgea eetaaaetet
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- 181 aaaaaatatc agatacctat etteetttgt taaateetta etetgetttt geaaagagat
- 241 ccgttacccc ttggtctcag atccgttcat tagtccagtc taagcctcgc catgtgaaag
- 301 aatatgttgc tgcttccaaa ttagatcagc atcctgtctt tgctacagga gaagaacagt
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- 1861 atcaacaaaa gagtgaaatg gcatccctta aagaacaaat cagacttctc aaagaacaac
- 1921 cacagaaaaa tgaaactgat accecatctt accagtcete atatcageet tttcacagtt
- 1981 tetetteece atatatgeee teaaateege etaacteace gtteacaact tttgeaaata
- 2041 ctccacaacc acaaccttct cttttttctc aatatccaat acagccaaaa tccccaaata
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